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10/709,743	05/26/2004	Bradley James Baxter	49925.830001.US0	3742

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HOLLAND & HART, LLP  
P.O BOX 8749  
DENVER, CO 80201

EXAMINER
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KING, BRADLEY T

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/709,743  
Filing Date: May 26, 2004  
Appellant(s): BAXTER, BRADLEY JAMES

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Shane M. Niebergall  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed January 18, 2008 appealing from the Office action mailed May 23, 2007.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

No amendment after final has been filed.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6,170,872	Bair et al	1-2001
5,951,045	Almefelt et al	09-1999
WO 93/23626	Pomero	11-1993

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 1, 12 and 26 have all been amended to recite substantially or generally "S" shape. The original disclosure fails to support this limitation. Note the only portion of the disclosure which appears to describe an "S" shape is in reference to the prior art. The disclosure describes the instant invention as a diamond shape, not an "S" shape. Further, it is unclear what it encompassed by substantially and generally "S" shaped. Particularly the scope of the terms

"substantially" and "generally". The original disclosure fails to provide any indication of the degree of "S" shape required. The limitations therefore constitute new matter.

Claims 1-2, 5-6, 10-12, 15-16, 20, 22, 26 and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Bair et al (US# 6170872).

Bair et al discloses all the limitations of the instant claims including; a first deformation member 3 and 5 having a curved shape with at least first and second opposing radii of curvature in the direction of a deformation axis; and a second deformation member (element near 7 and 12) interconnected with said first deformation member such that said first and second deformation members intersect to define at least first and second deformation cavities between said deformation members, at least one of said deformation cavities operable to close during application of a load in the direction of said deformation axis. See figure 4. One side of the first diamond and the opposite side of the second diamond form each deformation member.

Regarding claims 5, 10, 16, 28 and 29, note column 4, lines 19-23 which suggest making the diamonds of different circumference which would require both differing radii of curvature and deformation loads.

Claims 12-15, and 20-21 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 93/23626.

WO 93/23626 discloses all the limitations of the instant claims including; a first deformation member 1; and a second deformation member 1, wherein said first and

second deformation members are interconnected such that an intersection of the members creates first and second deformation cavities arranged along a deformation axis, said deformation cavities operable to collapse during energy absorption along said deformation axis.

Regarding claims 13-14, note notches 2.

Regarding claims 20-21, see figure 6.

Claims 7-9, 17-19 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bair et al (US# 6170872) in view of Almefelt et al (US# 5951045).

Bair et al discloses all the limitations of the instant claims with exception to the disclosure of flanges. Flanged portions are well known and further taught by Almefelt et al for modifying the stiffness and deformation characteristics of impact absorbers. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize flanges such as known and further taught by Almefelt et al in the device of Bair to allow a greater degree of control of the deformation and energy absorption characteristics of the device, and further to allow a greater degree of absorption without undue expense and weight.

Regarding claims 8-9, 18-19 and 24-25, note Almefelt teaches varying flange heights and Bair also suggests having differing absorption levels.

Claims 3-4, 13-14, 21 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bair et al (US# 6170872) in view of WO 93/23626.

Bair et al disclose all the limitations of the instant claims with exception to the use of the slot interlock arrangement. WO 93/23626 discloses a similar arrangement and further teaches the use of identical elements with interlocking slots as a means of assembling a modular impact absorbing structure. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the module interlocking arrangement such as taught by WO 93/23626 for the device of Bair et al as an improved means of assembling, thereby reducing manufacturing costs and increasing the flexibility of installation.

#### **(10) Response to Argument**

##### **A. Regarding the 112 1<sup>st</sup> rejection:**

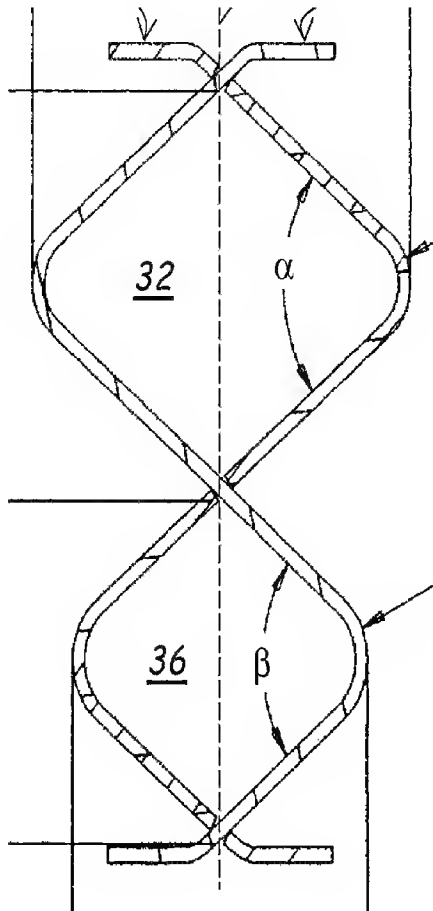
Appellant argues that the original claims recite "a first deformation member having a curved shape with at least first and second opposing radii of curvature in the direction of a deformation axis" which is the very definition of an S shape, however no basis or support for this definition can be found. The original disclosure fails to use the "generally S shape" terminology. Further, it is maintained that "s shape" is potentially narrower than the first and second opposing radii recitation. For instance, structure having a "z" shape can potentially meet the opposing radii recitation. The disclosure describes the instant invention as a diamond shape, not an "S" shape. The drawings don't appear to depict the element as being very s-shaped. It is unclear what it

encompassed by substantially and generally "S" shaped, particularly the scope of the terms "substantially" (claims 12 and 26) and "generally"(claim 1). The original disclosure fails to provide any indication of the degree of "S" shape required. As the original disclosure fails to use the generally or substantially S shaped terminology and the scope of the recitations is not clear, it is maintained that the limitations constitute new matter.

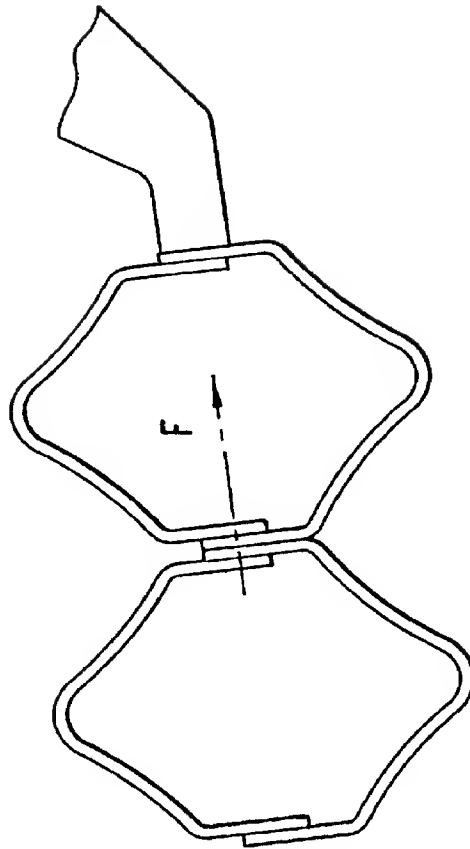
**B. Regarding the 102(b) over Bair et al:**

Appellant argues that the relied upon interpretation is improper as it redefines the prior art using applicant's disclosure, however the meaning of this is not clear. The Bair et al reference has been relied upon in an anticipatory rejection and has not been modified to meet the recitations of the instant claims; however, the claims have been given the broadest reasonable interpretation. It is maintained that the embodiment of figure 4 of Bair is fairly readable on the "s" shape recitation set forth by the claims. One side element of the first diamond and the opposite side element of the second diamond each form a deformation member. Nothing in the claim language precludes reading two of the c shaped elements of Bair on the "generally s shape" deformation member recitation.





Appellant's invention



Bair et al (figure 4, rotated)

It is maintained that the rejection is proper.

**C: Regarding the rejection under 102(b) over Pomero WO 93/23626:**

Appellant's arguments that the individual elements of Pomero can not be interpreted as being S shaped are narrower than the claim language. The claims fail to

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limit the deformation elements to a single element construction. As with Bair, it is maintained that two elements together can reasonably be considered a deformation element as required by the claims. Appellants have not identified any claim language precluding this interpretation. It is maintained that WO 93/23626 shows elements which form a generally 8 shape that is two superimposed S's and the rejection is proper.

**D: Regarding the rejection under 103 over Bair in view of Almefelt:**

Appellant's arguments appear to rely on the features of the independent claims. It is maintained that these features are possessed by Bair as set forth above in heading **B**. It is maintained that the rejections are proper.

**E: Regarding the rejection under 103 over Bair in view of Pomero:**

Appellant's arguments appear to rely on the features of the independent claims. It is maintained that these features are possessed by Bair as set forth above in heading **B**. It is maintained that the rejections are proper.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

BTK

/Bradley T King/

Primary Examiner, Art Unit 3683

Conferees:

Meredith Petravick /mcp/

Robert Siconolfi /R. S./